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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/069,830

07/16/2002

Peter Hessling

LEN-021022

5379

7590

05/20/2004

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EXAMINER

LOPEZ, FRANK D

ART UNIT

PAPER NUMBER

3745

DATE MAILED: 05/20/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/069,830

Applicant(s)

HESSLING, PETER

Examiner

F. Daniel Lopez

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3745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16,21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

Applicant's arguments filed March 8, 2004 have been fully considered but they are not deemed to be persuasive.

Applicant's arguments with respect to claims 12, 13 and 15-22 have been considered but are deemed to be moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by including the limitations of claim 14 into the independent claim (12). This resulted in the limitation of claim 14 being combined with limitations not previously combined.

Applicant appears to argue that Nichols does not disclose a shaft with identical diameter bearing areas. Applicant is mistaken. Figure 2 clearly shows the shaft (44) having a constant diameter.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

Claims 16, 21 and 22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16 line 2-3 "the bearing sites...essentially have the same diameter" does not further limit claim 12, since "the shaft having two bearing sites that form the areas where the shaft has its greatest diameter" is understood that the bearing sites have essentially the same "greatest diameter".

In claim 21 –in bearing areas in the housing, corresponding to—should be added before "the bearing sites", since the bearing sites are on the shaft.

In claim 22 line 2 "sites" should be –areas--, to agree with the changes to claim 21, suggested above.

***Claim Rejections - 35 USC § 103***

Claims 12, 13 and 15-22 are rejected under 35 U.S.C. § 103 as being unpatentable over Nichols in view of Trenner et al. Nichols discloses a pneumatic actuator comprising a shaft (44) rotatable in an axial direction perpendicular to an axis of a cylinder; a plastic piston (62, 66), movable in the cylinder and including teeth (74) extending along the axis, wherein the teeth engage teeth (60) in a separate element (50) attached to the shaft; wherein the shaft has two same diameter bearing sites mounted directly in the housing at bearing areas; wherein the piston fixes the shaft in its axial direction by positive engagement of sides (72) of the piston forming a groove engaging sides of the toothed area, without additional fasteners; wherein the toothed area of the shaft has a larger diameter than the bearing sites; but does not disclose that the bearing sites form areas where the shaft has its greatest diameter; or that there is at least one peripheral groove in the shaft that engages a segment of the piston, running in the axial direction.

Trenner et al teaches, for an actuator comprising a shaft (2) rotatable in an axial direction perpendicular to an axis of a cylinder; a piston, movable in the cylinder and including teeth (11) extending along the axis, wherein the teeth engage teeth of the shaft; wherein the shaft has two bearing sites (corresponding to 49, 50), such that the shaft is inserted into bearing areas corresponding to the bearing sites; that the toothed area of the shaft is integral with the shaft and slightly smaller than the largest diameter bearing site. It is understood that the purpose of making the toothed area integral with the shaft is for ease of assembly, and the purpose of the slightly smaller diameter of the toothed area is to prevent damaging the toothed area.

Since Nichols and Trenner et al are both from the same field of endeavor, the purpose disclosed by Trenner et al would have been recognized in the pertinent art of Nichols. It would have been obvious at the time the invention was made to one having ordinary skill in the art to make the toothed area of Nichols integral with the shaft and having a diameter slightly smaller than the larger diameter bearing site, as taught by Trenner et al, for the purpose of ease of assembly and to prevent damaging the toothed

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area. Note that a groove between each bearing site and the toothed are would be needed, to accommodate the sides of the groove in the piston.

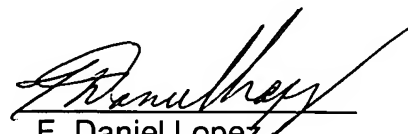
### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is (703) 308-0008. The examiner can normally be reached on Monday-Thursday from 6:30 AM -4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on (703) 308-1044. The fax number for this group is (703) 308-7763. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.

  
F. Daniel Lopez  
Primary Examiner  
Art Unit 3745  
May 19, 2004